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# **2005 Volunteer Salmon Watcher Program**

**Lake Washington Watershed,  
Puget Sound WRIA 8 Streams,  
and Vashon Island**

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May 2006



**King County**

Department of Natural Resources and Parks  
Water and Land Resources Division

**Science Section**

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and Vashon Island**

King County Water and Land Resources Division, in cooperation with:  
Lake Washington/Cedar/Sammamish Watershed Forum  
Bellevue Stream Team  
Cities of Bothell, Kirkland, Redmond, Renton, Seattle, and Woodinville  
Snohomish County Surface Water Management  
Vashon-Maury Island Land Trust

Alternate formats are available upon request by contacting  
206-296-7592 (Voice) or 800-833-6388 (TTY).



**King County**

Department of Natural Resources and Parks  
Water and Land Resources Division  
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## Summary

In 1996, the Bellevue Stream Team, King County Water and Land Resources Division, the Muckleshoot Indian Tribe, the Snohomish County Surface Water Management Division, and the Washington Department of Fish and Wildlife began a jointly coordinated volunteer spawning survey program in the Lake Washington Watershed (all waters draining through the Ballard Locks). In 1997, the program evolved into the Salmon Watcher Program as it is today and has been conducted annually since. The purpose of the program is to document the distribution of spawning adult salmon throughout the basin via an active public outreach and education program, and subsequently consolidate all the information into a single resource (this report). These data can be used by policy makers and the public to improve how aquatic resources are managed, to protect salmon and trout species, and to enhance their habitat.

For the 2005 program, 137 volunteers surveyed 123 sites on 55 streams throughout the Lake Washington Watershed, other WRIA 8 streams in Central Puget Sound, and Vashon Island streams from August 27, 2005 to February 7, 2006. An additional 7 volunteers surveyed 11 sites on 4 streams in Central Puget Sound outside the project area and the Snoqualmie Watershed. Because volunteers collect the data in this program, the agencies are able to obtain more information from far more locations than would otherwise be possible. However, data in this report should be used with the following factors in mind:

- (1) Volunteer expertise in locating and identifying fish species varied from very high to very low;
- (2) Coverage of streams by volunteers was by no means complete; therefore, fish distribution information is not complete;
- (3) Volunteers view stream sites for relatively brief periods of time during the spawning season;
- (4) Determination of survey sites was based on volunteer availability and site accessibility (and some survey locations change from year to year, even on the same creek);
- (5) Spawning fish can be difficult to see and therefore may have passed through reaches undetected; and
- (6) Volunteer data indicate only where minimum fish distributions extend to, but do not indicate reaches where fish are definitively absent (in other words, the data confirms fish presence, but does not confirm absence).

Volunteers observed the following species: sockeye, kokanee, coho, chinook, and chum salmon, as well as trout species. The following results were compiled from volunteer observations: (1) Coho had the widest distribution throughout the official survey area and were seen in the most streams—they were seen in 9 basins in a total of 22 streams; (2) sockeye were seen in the greatest numbers (4,985 enumerated); (3) chinook were observed in 5 Lake Washington basins; (4) Kokanee observations were observed in 4 Lake Washington basins; and (5) chum were observed in 1 Vashon stream and Boeing Creek and were reported in 3 Lake Washington Watershed streams.

This report is published on the Internet and can be found using the hyperlinks on this web page: <http://dnr.metrokc.gov/wlr/waterres/salmon/reports.htm>.

Maps included in this report have been published on the Internet and can be found using the hyperlinks on this web page: <http://dnr.metrokc.gov/wlr/waterres/salmon/maps.htm>.

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## Acknowledgements

Many thanks to all the dedicated volunteers for spending many hours in cold and wet weather to collect the information for this report—some for the ninth year in a row, and sometimes without ever seeing a single fish. Without the volunteers there would be no data, no maps, and no report. They help make a positive difference here in the Northwest, not only by reporting fish species, but by acting as the eyes and ears of the streams, reporting stream blockages as well as illegal and other suspect activities. You are the stewards of resources that make the Pacific Northwest so special. A *huge* Thank You to all!

We also want to acknowledge the various individuals from the cooperating jurisdictions. Every year these folks meet and plan the program, organize and stage the training sessions, and invest lots of time attending to the questions of the volunteers. Thanks (in no particular order) to Laurie Devereaux, Bob Spencer, Debra Crawford, Peter Holte, Maureen Meehan, Mary Maier, Kollin Higgins, Kit Paulsen, Gino Lucchetti, Ray Heller, Wendy Collins, Karren Gratt, Hans Berge, and Laura Reed.

We continue to owe immeasurable gratitude to Eric Maia for his talent, time, energy, creative thinking, skills, and patience during the building of our SQL server Salmon Watcher database. His efforts make these reports much faster to generate and make online data entry possible.

Jennifer Vanderhoof writes these annual reports.

Finally, we would like to thank those who partially sponsored our funding: Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Forum through a King Conservation District grant.

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## Introduction

The Salmon Watcher Program is a volunteer program that originated in 1996 and whose purpose is to record observations of adult fall-spawning salmonids. Volunteers are recruited and trained to identify and watch for spawning salmon throughout Water Resource Inventory Area 8 (WRIA 8), which includes the Lake Washington Watershed and some streams leading to Puget Sound (Figure 1). Volunteers are also trained to watch on Vashon Island. Regional agencies who participated in the Salmon Watcher Program along with King County during the 2005 season include the Bellevue Stream Team, the cities of Bothell, Kirkland, Redmond, Renton, Seattle, and Woodinville, Snohomish County Surface Water Management, and the Vashon-Maury Island Land Trust.

The Salmon Watcher Program was initiated to expand on current efforts undertaken by resource agencies to document the distribution of spawning salmon in WRIA 8, including the Lake Washington Watershed. Basins that comprise the Lake Washington Watershed include Bear Creek, Cedar River, East Lake Washington, West Lake Sammamish, East Lake Sammamish, Issaquah Creek, and North Lake Washington (divided into the North Lake Washington tributaries and the Sammamish River tributaries). Other streams in WRIA 8 that were watched included Pipers Creek and Boeing Creek, both of which drain to Puget Sound. Vashon Island streams were observed as part of the Salmon Watcher Program for the fourth year in a row.

Salmon Watcher volunteers annually collect information on the presence of fall-spawning salmonids, including chinook, coho, sockeye, kokanee (resident form of sockeye), and chum salmon, as well as trout species. Data of this type become more important in the region as salmonids, such as Puget Sound chinook, are listed under the Endangered Species Act.

Because volunteers do this work, gathering this volume of data is accomplished with reduced agency resources, and the watersheds' residents can become involved and educated at the same time. Further, interactions with agency personnel foster positive relationships between the public and government agencies. With current budget and time constraints of agency personnel, most of the data collected in this effort would not be collected otherwise.

In addition to summaries of fish observed during the fall season, this 2005 report contains information and some statistics about the volunteers. It should be noted that this report summarizes data collected only by Salmon Watcher volunteers, and it is therefore in no way intended to be an exhaustive report of fish distribution in WRIA 8 or on Vashon. Other fish surveys are conducted annually by county, state, city, and federal agencies and non-profit organizations. For example, surveys have been conducted by volunteers or County staff to look specifically for kokanee and chinook; the results of these surveys are reported separately and are not included here.

**Figure 1. Basins surveyed for the 2005 Salmon Watcher Program (see insert).**



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## Methods

Volunteers were recruited during late summer and early fall of 2005 to observe fish in streams throughout the Lake Washington Watershed<sup>1</sup>, other WRIA 8 streams, and streams on Vashon Island. The 137 volunteers who surveyed in the project area, plus 7 individuals who observed outside the project area, are listed in Table 1 (totals: 144 individuals, pairs, or groups totaling 167 people plus one elementary class).

**Table 1. Volunteer observers for the 2005 Salmon Watcher Program.**

---

Ann Agaard	Mike Dziuk	Jim McRoberts
Staci Adman	Willie Elliot	Helen Meeker
Susan and William Aho	Gary & Bob Emerson	Joe Meeker
Eleanor Allen	Rod Epps	Jeff Mendenhall
Ann Amort	Michael Erickson	Amanda Mondt
Dennis Anderson	Sara & Richard Farmer	Dana Nelson
Jill & Murray Andrews	Melodie Farrell	Eric & Andrew Nelson
Chad Armour	Adrienne Fox	Jane Neubauer
Angelina Artero	Valerie Franzke	Roger and Joy Neubauer
Russ Atkins	Hon Cheung Fung	Hal & Peggy Newsom
Kathleen Auld	Judy Gilbert	Anette Olney
Frank Backus	Helgard Gray	Yoshiko Otonari
Tina & Craig Bailey	Ron Green	Isabelle Otter
Neil Baldock	John & Sally Gummeson	John E Palevich
Jeanette Banobi	George Hadley	Tammy Parise
Ed and Sheila Barnes	Jill Harris	Clint Peebles
Richard Barrett	Sandy & Mithcell Hodge	Betty Peltzer
Cathleen Barry	Joyce & Martin Boulander Hoikka	Lance Peterson
Siri Betcher	Lon Hoover	Sarah Phillips
Shirley Biccum	Kyle Houser	Gary Pilawski
Marilyn & Tom Blue	Pat Livingston and Jim Hughes	Dusanka Poljak Grez
Mamie & Chuck Bolender	Matt & Denise Jagielo	Woodridge Elementary
Bosworth Family	Nels & Crista Johnson	Jason Qui
Heidi Brantzeg	Jeremy Jones	Gray Rand
Bob and Diane Brenno	Peg Jones	Joshua Rao
Brian Brenno	Barbara Jurgens	Kelly Rau
Janet Broadus	Carol and Ed Kane	Larry Reymann
Janeene & Steven Chilcoat	Pam Kelly	Adrienne Ross
Mike Conlan	Donna Klemka	Heather Rush
Jim Crabtree	Kathy Kolt	Kathleen Ryan
Kathleen Crabtree	Janusz Komorowski	Ed Schein
Nancy Daar	Julie Kranseler	Carrie & Drew Schwitters
Dawn & Isabelle Dailidenas	Yvonne Kuperberg	Lisa Sheets
James & Edna Dam	D. Quinn Lean	Kathryn Sheldon
Daniel J. Davis	Mark & Jodi Linstead	Patty Shelton
Alyse & Dennis DeKraker	Ginny Lodwig	Yoshi Shelton
Sonia Delaney	Loudon Family	Chris Shimada
Paula DeLucia	Barbara Lynum	Gary Smith
Barbara Dickson	Ken Mackey	Warren Smith
Chuck Dolan	Boyd Massie	Andrew Snavely
Matt Dunnahoe	Mike Matulka	Kay Snavely
Erin Duvall	Koan Maurer	Nick Snavely

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<sup>1</sup> In this document, the Lake Washington Watershed means all waters draining through the Ballard Locks, and the subbasins of the Lake Washington Watershed are referred to as basins (e.g., Issaquah Creek Basin).

**Table 1. Continued. Volunteer observers for the 2005 Salmon Watcher Program.**

Jim & Susan Sproull	Laurie Tucker	Irv Weisser
Kirk Stauffer	Nancy Upton	Lisa Westgard
Mike Stults	Mary Vincent	Maggie & Brian Windus
Lloyd & Joan Takasugi	Suzie Wagner	Barbara AW Wright
Laura Thomas	Preston Walls	Dave Wright
Wendy Townsend	Helen Weems	Linda Wylie

## Volunteer Training

Agency staff held a total of seven classroom training sessions in 2005. One field training sessions was conducted for trained volunteers at Cottage Lake Creek in early October. Additionally, Snohomish County held separate training sessions for its Salmon Watcher program, an off-shoot of the Lake Washington Watershed program, and a small number of volunteers whose data are reported herein were trained in Snohomish County.

All volunteers were taught to identify adult spawning salmon species with a slide presentation, which was placed on King County's web site so volunteers could review it any time. During the training sessions, volunteers signed up for one or more sites to survey. They were given salmon identification materials, including color adult salmon identification cards and spawner timing charts. Volunteers were taught how to fill out and return data forms. Volunteers were also given phone numbers to call for situations that might arise in the field, including drainage issues, fish kills, and suspicion of pollutants.

Survey locations were prioritized by staff from each cooperating jurisdiction based on the need for information; however, sites were surveyed based on volunteer availability. Volunteers were assigned to stream locations near their homes or customary walking places whenever possible. Not all sites watched were prioritized by agency staff: some sites were watched because of the close proximity to a volunteer's home. Volunteers were instructed to stay on public property (bridges, parks, etc.) unless they gained permission from the landowners to enter private property or the survey location was on their own property. Figure 2 shows all the sites watched by volunteers during the 2005 fall spawning season.

**Figure 2. Sites surveyed by Salmon Watcher volunteers in 2005 (see insert).**

## Data Collection

Surveys were conducted between August 27, 2005, and February 7, 2006, though most surveys began in September and were concluded in December (Table 2). Volunteers were asked to watch at their survey sites for at least 15 minutes, twice per week, and record any adult salmonids they observed. Actual survey frequency and duration varied greatly among volunteers.

**Table 2. Number of surveys per month during 2005 Salmon Watcher season.**

Month	Number of Surveys
August	3
September	499
October	1353
November	1108
December	590
January	53
February	2

Volunteers counted all live and dead adult salmonids they observed. If a volunteer surveyed the same site more than one time on the same day, the highest fish count was used; however, often more than one volunteer surveyed the same site on a single day and their individual observations were used. Volunteers were asked to report only once those dead fish observed on more than one occasion and to note subsequent observations of the same fish in their comments. Juvenile fish were noted if present. Unidentified fish were counted and described when possible.

Volunteers were asked if they could tell whether the fish they saw had an adipose fin. Volunteers were asked to note how many citizens they came into contact with during their streamside duties. They were also asked if they noticed anything at their site that needed to be reported and whether they reported it. All data were recorded onto field data forms (Appendix B), which were mailed to Salmon Watcher staff on a monthly basis.

Volunteers were asked to fill out a “First Fish ID” form. This form had several multiple-choice questions about various key characteristics for identifying fish. Volunteers were asked to fill one of these forms out the first time they saw a new species and to turn the forms in with their data. The purpose of this form is twofold: (1) to aid volunteers in identification by highlighting key characteristics, and (2) to aid Salmon Watcher staff in quality control.

## **Quality Assurance/Quality Control**

Several means were used to assure that the data collected from volunteers were as accurate and consistent as possible during all phases of the program. Volunteers were provided with training by fish experts: data included in this report were collected either by returning volunteers or new volunteers who attended one of the training sessions for the 2005 season. Volunteers were provided laminated fish identification cards and a packet of training materials with fish identification information in it. Duplicate as well as additional fish identification materials were placed on the Internet. Contact persons were made available to volunteers to answer questions and verify species identification when necessary; volunteers were encouraged to call upon these individuals if they were unsure of species identification.

Staff receiving the data sheets screened them for anything requiring immediate attention such as an unusual fish sighting or potential water quality problems. If an unusual fish sighting was noticed on a data form, agency staff contacted the volunteer to further inquire about what characteristics were used to identify the fish. The First Fish ID forms were intended to provide another means by which fish identifications could be checked and verified.

Data were input into a SQL server database housed at King County. The database has been designed to catch anomalies in data entry, such as dates not in the season. The database also poses questions when it detects that a count of a certain species has never been as high at that site in that month in previous years. These and other checks were built into the database software to increase accuracy of input data. Following data entry, the figures were verified at least once by agency staff to ensure accuracy, as well as catch anything that might need addressing. The data reviewers are familiar with the basins and the fish runs typical for the basins.

Volunteers on Lake Washington Watershed stream sites located in Snohomish County turned in their data to Snohomish County, who then passed it along to King County at the end of the season to be integrated into the SQL server Salmon Watcher database.

Because of the limitations of usage of these data (Limitations of Volunteer Data, page 28) and despite quality control measures, the data are intended to be used only to make preliminary evaluations of the distribution of spawning salmonids in the Lake Washington Watershed and Vashon streams.

## Results and Discussion

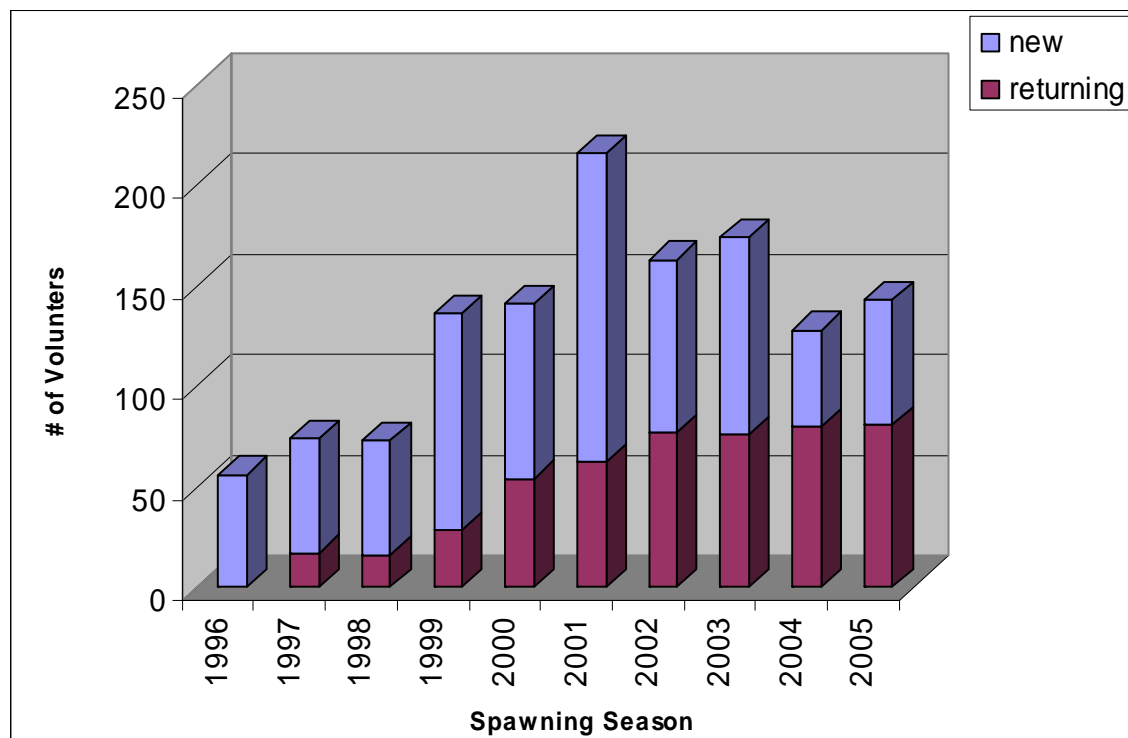
In 2005, a total of 134 sites on 59 streams were surveyed by 144 volunteers (Table 3).

**Table 3. Numbers of streams, sites, and volunteers involved in the 2005 spawning season.**

Area	# streams	# sites	# volunteers
Lake Washington Watershed	47	105	118
Other WRIA 8 Streams	3	8	8
Vashon Island	5	10	11
Other (outside program area)	4	11	7
Total	59	134	144

In 2005, 77 out of 137 volunteers (56 percent) watching in the official program area were returnees (Figure 3). The number of returning volunteers has remained consistent for several years. Of the 77 returnees, 2 pairs of volunteers have surveyed every year of the program. Additionally, 5 out of 7 volunteers at sites outside the funded program areas were returnees.

**Figure 3. Total number of new and returning volunteers for each year of the Salmon Watcher Program<sup>2</sup>.**



<sup>2</sup> Note that volunteers in 2001 were from a larger geographic area. For further discussion, please see “Volunteer Activity” on page 27.



## Basin Summary

In the 2005 spawning season, chinook were reported in the greatest numbers in Bear Creek and Issaquah Creek basins (Table 4). However, more hours were spent watching in Issaquah Creek. Table 5 shows how many fish were observed per hour watched in each basin. The greatest number of kokanee were observed in Bear Creek Basin; however, the highest number per hour watched was far greater in East Lake Sammamish Basin (Table 5).

**Table 4. Species enumeration within surveyed basins during the 2005 Salmon Watcher season.**

Basin	Chinook	Chum	Coho	Kokanee	Sockeye	Trou t	Unid.	Basin Total
Big Bear Creek	113	-	12	28	507	-	70	730
Cedar River	13	4	135	-	3734	-	50	3936
East Lake Washington	47	-	3	-	54	-	54	158
West Lake Sammamish	-	3	7	3	-	-	-	13
East Lake Sammamish	-	-	-	22	-	-	1	23
Issaquah Creek	95	-	108	-	32	3	5	243
North Lake Washington Tribs.	-	-	14	-	14	1	24	53
Samm. River Tribs.	15	-	5	15	644	1	22	702
Vashon Island	-	2	31	-	-	-	1	34
Central Puget Sound - WRIA 8	-	14	21	-	-	-	3	38
Other Central Puget Sound*	-	28	50	-	-	-	37	115
Snoqualmie River*	-	-	2	-	-	-	-	2
Species Total	283	51	388	68	4985	5	267	6047

\*Indicates basins outside Program area.

**Table 5. Species observed per hour of volunteer time watched in each basin during the 2005 Salmon Watcher season.**

Basin	Chinook	Chum	Coho	Kokanee	Sockeye	Trou t	Unid.	Basin Total
Big Bear Creek	1	0	**	**	5	0	1	7
Cedar River	**	**	**	0	12	0	**	13
East Lake Washington	**	0	**	0	**	0	**	**
West Lake Sammamish	0	**	**	**	0	0	0	1
East Lake Sammamish	0	0	0	9	0	0	**	10
Issaquah Creek	4	0	4	0	1	**	**	9
North Lake Washington Tribs.	0	0	**	0	**	**	**	**
Samm. River Tribs.	**	0	**	**	5	**	**	5
Vashon Island	0	**	1	0	0	0	**	1
Central Puget Sound - WRIA 8	0	**	**	0	0	0	**	1
Other Central Puget Sound*	0	1	1	0	0	0	1	3
Snoqualmie River*	0	0	1	0	0	0	0	1
Species Total	5	1	8	10	24	0	3	51

\*Indicates basins outside Program area.

\*\*Numbers are rounded; therefore, any counts less than 0.5 per hour will show up as zero.

Detailed results for each basin in the program are presented below in basin groupings. Data include stream name and state stream numbers as assigned by Williams et al. (1975), corresponding stream sites (with Site ID and river mile), dates of surveys, number of surveys, number of surveyors, and number of each species observed. The unique Site ID numbers that correspond with each survey site are used to distinguish the sites. A site, with its unique ID number, will always have the same data associated with it, regardless of refined river mile (RM) designations. River mile designations are generally derived from Williams et al. (1975) combined with measurements made in GIS. Additionally, a designated site may vary a few feet from year to year: (1) if a volunteer watches on the upstream side of a bridge versus the downstream side, (2) if a new volunteer happens to watch a few yards from where a previous watcher observed, or (3) if a volunteer moves a few feet to observe in an area of better spawning habitat or visibility.

Maps are presented for each basin in the program area and depict observations of sockeye, coho, chinook, kokanee, and chum identified during the survey. The streams surveyed in the Lake Washington Watershed were grouped into the following basins: Big Bear Creek, Cedar River, East Lake Washington, West Lake Sammamish, East Lake Sammamish, Issaquah Creek, and North Lake Washington (split into North Lake Washington tributaries and Sammamish River tributaries). Salmonids were observed in all basins surveyed in 2005. Trout and unidentified species were not mapped.

## Big Bear Creek Basin

Volunteers surveyed 13 sites in 5 streams in the Big Bear Creek Basin in 2005 (Figure 2). From 1 to 6 sites were watched per stream, and the total number of surveys ranged from 9 to 65 per site (Table 6). Each site was monitored by between 1 and 3 volunteers.

**Table 6. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers<sup>3</sup>, and years the sites were watched for each stream surveyed in the Big Bear Creek Basin for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Big Bear Creek	080105	453	0.9	9/9 - 11/23	13	1	2001, 2002, 2003, 2004, 2005
		65	2.7	9/1 - 12/29	36	2	1997, 1998, 1999, 2000, 2002, 2003, 2004, 2005
		101	4.9	9/17 - 11/23	32	1	1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		89	6	9/1 - 11/30	26	1	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		136	7.4	9/12 - 11/21	65	3	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		503	7.85	9/30 - 11/29	18	1	2002, 2004, 2005
Trib. to Bear	-	90	0.2	9/3 - 11/30	21	1	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
Cottage Lake Cr.	080122	102	0.6	9/17 - 10/28	11	1	1997, 1998, 2001, 2002, 2003, 2004, 2005
		391	1.2	9/18 - 11/6	9	1	2000, 2001, 2002, 2005
		105	1.3	9/15 - 12/28	13	1	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		50	2.2	9/12 - 12/30	58	3	1997, 1999, 2000, 2001, 2002, 2003, 2004, 2005
Rutherford Creek	080110	462	0.45	10/3 - 12/30	18	1	2003, 2004, 2005
Struve Creek	080131	583	1.3	10/9 - 12/18	11	1	2004, 2005

Salmonids were found in three of the five streams observed in Big Bear Creek Basin (Table 7). Chinook, coho, kokanee, and sockeye were all seen in Bear Creek and its primary tributary, Cottage Lake Creek. The most numerous salmonid species observed by volunteers was sockeye, which was found in Big Bear Creek in the greatest quantity. No adult spawners were observed in Rutherford Creek.

<sup>3</sup> "Volunteer," when used in this context, is defined as an individual, pair, or group of people who observed a stream site for adult spawning salmonids at a given time on a given date.

**Table 7. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Big Bear Creek Basin for the 2005 spawning season.**

Stream	Site ID	RM	Chinook	Coho	Kokanee	Sockeye	Unid.
<b>Big Bear Creek</b>	453	0.9	1 (10/21)	-	2 (10/21)	38 (10/17 - 11/10)	-
	65	2.7	2 (9/30 - 10/1)	-	-	30 (9/30 - 10/23)	3 (9/30 - 10/23)
	101	4.9	9 (9/30 - 10/24)	9 (9/30 - 11/2)	9 (9/28 - 10/6)	157 (9/28 - 11/1)	2 (10/19 - 11/1)
	89	6	87 (9/23 - 10/26)	-	-	232 (9/30 - 10/29)	-
	136	7.4	1 (11/21)	-	-	20 (9/16 - 10/14)	3 (9/29 - 10/11)
	503	7.85	-	2 (11/2)	12 (9/30 - 10/7)	1 (10/13)	-
<b>Trib. to Bear</b>	90	0.2	-	-	-	-	-
<b>Cottage Lake Cr.</b>	102	0.6	-	-	-	15 (9/28 - 10/28)	-
	391	1.2	-	-	-	-	49 (10/2 - 11/6)
	105	1.3	2 (10/7)	1 (11/12)	5 (10/7 - 10/12)	1 (9/26)	8 (10/7 - 11/6)
	50	2.2	11 (9/12 - 10/18)	-	-	13 (9/25 - 10/12)	4 (9/30 - 11/2)
<b>Rutherford Creek</b>	462	0.45	-	-	-	-	-
<b>Struve Creek</b>	583	1.3	-	-	-	-	1 (11/5)

Salmon Watcher volunteers viewed Bear Creek as far as RM 7.85, which is a private residence at NE 162<sup>nd</sup> St. Coho, kokanee, and sockeye were all seen as far upstream as that location. Chinook were seen at every site as far upstream as site 136, the Tolt pipeline crossing. Sockeye were observed at every site watched on Bear Creek.

Salmon Watcher volunteers viewed Cottage Lake Creek as far as RM 2.2, the Tolt pipeline crossing, and chinook and sockeye were both observed at that location. Coho and kokanee were observed as far upstream as RM 1.3, near 194<sup>th</sup> Ave. NE and Bear Creek Rd.

A salmonid was observed further upstream by Salmon Watcher volunteers than in previous years. However, only one fish was observed and the species was not able to be identified. This fish was observed at RM 1.3, where 216<sup>th</sup> Ave. NE crosses Struve Creek.

The observations of sockeye, coho, chinook, and kokanee in the Big Bear Creek Basin determined from volunteer surveys in are shown in Figure 4.

**Figure 4. Observations of salmonids in the Big Bear Creek Basin (see insert).**

## Cedar River Basin

Volunteers surveyed 22 sites in 10 streams in the Cedar River Basin in 2005 (Figure 2). From 1 to 5 sites were watched per stream, and the total number of surveys ranged from 4 to 97 per site (Table 8). Each site was monitored by between 1 and 3 volunteers.

**Table 8. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Cedar River Basin for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Cedar River  (Cavanaugh Pond)	080299	201	1.3	8/27 - 11/1	25	2	2001, 2005
		205	2.9	9/7 - 9/28	5	1	1999, 2001, 2005
		207	5.3	9/6 - 12/14	20	1	1999, 2000, 2001, 2002, 2003, 2005
		139	6.4	11/15 - 2/7/06	35	1	1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		613	19.7	10/6 - 12/31	24	1	2005
Side Channel	-	557	0.5	9/23 - 1/3/06	53	2	2003, 2005
John's Creek	-	591	0	10/14 - 10/28	4	1	2005
Kennydale Creek	-	590	0.1	9/18 - 10/7	5	1	2005
Maplewood Creek	080302	593	0.4	8/27 - 10/16	9	1	2005
Peterson Creek	080328	461	1.3	9/6 - 12/18	19	1	2001, 2002, 2003, 2005
Rock Creek	080338	410	0.2	10/1 - 12/11	71	1	2001, 2002, 2003, 2004, 2005
		154	0.4	9/18 - 12/26	22	2	1999, 2000, 2001, 2002, 2003, 2004, 2005
		49	1.3	10/12 - 1/1/06	34	2	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		437	1.6	10/12 - 1/1/06	22	1	2000, 2005
Taylor Creek	080320	588	0.37	9/23 - 12/28	96	2	2004, 2005
		596	0.5	9/21 - 12/11	72	2	2004, 2005
		129	1.2	10/30 - 12/11	7	1	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		71	1.8	9/15 - 12/31	97	3	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		126	2.4	10/30 - 12/11	7	1	1998, 2001, 2002, 2003, 2004, 2005
Trib. 0321	080321	592	0.15	10/6 - 11/25	9	1	2004, 2005
Walsh Lake Diversion	080341	460	0.1	9/30 - 12/31	27	1	2003, 2005
		40	1.1	9/25 - 12/31	27	1	2000, 2003, 2005

The Cedar River was watched further upstream than in previous years of the Salmon Watcher Program; it was watched at river mile 19.7, the train trestle at Big Bend Natural Area. Chinook, coho, and sockeye were all observed at that location.

John's Creek, Kennydale Creek, and Maplewood Creek were all watched for the first time in 2005. John's Creek and Kennydale Creek both empty directly into Lake Washington, and Maplewood Creek is a tributary to the Cedar River. John's Creek was watched at the mouth. One sockeye and four unidentified fish were observed at that location. No adult spawners were observed in either Kennydale or Maplewood Creek. It should be noted these sites were only watched very few times (Table 8). No adult spawners were observed in Peterson Creek either.

Chinook were observed in the Cedar River and Walsh Lake Diversion (Table 9). Coho were observed in the Cedar River, Rock Creek, Taylor Creek, and Walsh Lake Diversion. Sockeye were found in those same streams as well as one tributary to Taylor Creek and the newly watched John's Creek.

**Table 9. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Cedar River Basin for the 2005 spawning season.**

Stream	Site ID	RM	Chinook	Chum	Coho	Sockeye	Unidentified
Cedar River  Cavanaugh Pond  Side Channel	201	1.3	-	-	-	428 (10/1 - 11/1)	-
	205	2.9	-	-	-	-	-
	207	5.3	2 (10/13 - 10/25)	-	-	381 (10/5 - 12/7)	11 (11/21 - 12/3)
	139	6.4	-	-	-	934 (11/15 - 2/1/06)	-
	613	19.7	2 (10/6)	-	2 (12/27)	293 (10/6 - 11/6)	2 (11/6 - 11/21)
	557	0.5	-	3 (11/6 - 11/21)	29 (11/8 - 1/3/06)	659 (9/30 - 12/15)	8 (9/30 - 12/17)
John's Creek	591	0	-	-	-	1 (10/15)	5 (10/15 - 10/28)
Kennydale Creek	590	0.1	-	-	-	-	-
Maplewood Creek	593	0.4	-	-	-	-	-
Peterson Creek	461	1.3	-	-	-	-	-
Rock Creek	410	0.2	-	-	-	37 (10/18 - 11/18)	-
	154	0.4	-	-	4 (12/26 - 12/26)	61 (10/30 - 12/26)	1 (10/30)
	49	1.3	-	-	4 (12/24 - 12/27)	-	-
	437	1.6	-	-	-	1 (11/3)	-
Taylor Creek	588	0.37	-	-	-	35 (10/17 - 12/5)	6 (11/3 - 11/22)
	596	0.5	-	-	-	300 (10/17 - 12/10)	4 (10/17 - 10/23)
	129	1.2	-	-	-	-	-
	71	1.8	-	-	8 (11/10 - 12/31)	59 (10/20 - 11/21)	10 (11/2 - 12/20)
	126	2.4	-	-	-	-	-
Trib. 0321	592	0.15	-	-	-	2 (11/3 - 11/24)	-
Walsh Lake Diversion	460	0.1	9 (9/30 - 11/27)	1 (11/2)	88 (11/14 - 12/31)	543 (9/30 - 12/10)	3 (10/30 - 11/6)
	40	1.1	-	-	-	-	-

The downstream end of the Cedar River side channel surveyed in the 2005 Salmon Watcher season (site 557) is located at approximately RM 15.3 along the Cedar. Coho and sockeye were observed in the side channel. Chum were also reported, but they were not verified by a professional biologist. Because some sockeye have markings that can resemble chum, it is not certain if these fish were chum or sockeye. One chum was similarly reported in the Walsh Lake Diversion by the same volunteer. If these fish were chum, they would represent an interesting anomaly—it is not unusual to have some fish stray off course, but it is unusual to have very many.

In addition to the chinook observed in the Cedar River, they were also seen in Walsh Lake Diversion, about a tenth of a mile upstream of the mouth. Coho and sockeye were also seen in the diversion channel at the lower of two sites watched.

The observations of sockeye, chinook, and coho in the Cedar River Basin determined from volunteer surveys are shown in Figure 5.

**Figure 5. Observations of salmonids in the Cedar River Basin (see insert).**

## East Lake Washington Basin

Volunteers surveyed 24 sites in 12 streams in the East Lake Washington Basin in 2005 (Figure 2). From 1 to 4 sites were watched per stream, and the total number of surveys ranged from 14 to 119 per site (Table 10). Each site was monitored by 1 to 7 volunteers.

**Table 10. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the East Lake Washington Basin for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Carillon Creek	-	475	0	9/12 - 12/17	20	1	2001, 2002, 2003, 2005
Coal Creek	080268	439	0.6	9/25 - 12/26	21	2	2001, 2002, 2003, 2004, 2005
		46	0.8	9/11 - 12/8	53	5	1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		441	2	9/18 - 12/1	29	3	2001, 2002, 2003, 2004, 2005
		442	2.1	9/9 - 12/18	42	3	2001, 2002, 2003, 2004, 2005
Cochran Springs Creek	080253	197	0.15	9/17 - 12/26	35	1	2000, 2005
East Creek	-	514	0.2	9/28 - 12/29	51	4	2003, 2005
Goff Creek	080264	447	0.1	9/18 - 11/29	33	2	2003, 2004, 2005
Kelsey Creek	080259	13	2	9/9 - 1/31/06	86	5	1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		124	2.4	9/17 - 12/17	30	1	1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		120	3	9/16 - 12/4	44	5	1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		586	4.9	9/21 - 11/28	22	1	2004, 2005
May Creek	080282	208	0.2	9/10 - 12/29	37	3	2001, 2002, 2003, 2004, 2005
		432	0.5	9/14 - 12/29	14	1	2000, 2004, 2005
Mercer Slough	080259	445	1.6	9/17 - 12/29	91	5	2001, 2003, 2004, 2005
Richards Creek	080261	27	0.7	9/11 - 12/29	119	7	1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		80	1.6	9/17 - 12/18	33	2	1998, 2002, 2003, 2004, 2005
Sturtevant Creek	080260	117	0.25	9/17 - 12/18	40	2	1997, 1998, 1999, 2001, 2002, 2003, 2004, 2005
Valley Creek	080266	122	0.1	9/17 - 11/22	20	2	1997, 1998, 1999, 2000, 2001, 2003, 2004, 2005
		221	0.7	9/13 - 12/20	30	1	1999, 2000, 2001, 2002, 2003, 2004, 2005
West Trib. Kelsey Cr.	080264	116	0.25	9/12 - 12/4	45	4	1998, 1999, 2001, 2002, 2003, 2004, 2005
		325	0.7	9/18 - 12/23	47	1	1997, 2001, 2002, 2003, 2004, 2005
		506	0.9	9/11 - 12/14	25	1	2002, 2003, 2004, 2005
		73	1.1	9/17 - 12/18	34	1	1998, 2000, 2004, 2005

Salmonids were found in 8 of the 12 streams surveyed in 2005 (Table 11). Chinook were seen by volunteers for the first time in Sturtevant Creek at the only site watched, at RM 0.25 (Table 12). Chinook were also observed in Goff Creek, May Creek, Kelsey Creek, West Trib. Kelsey Creek, and Mercer Slough/Kelsey Creek. Sockeye were seen in May Creek, Mercer Slough, and West Trib. Kelsey Creek. Coho were seen in only Kelsey Creek and May Creek. No kokanee were observed in East Lake Washington. No adult spawners were observed in Carillon Creek, Cochran Spring Creek, East Creek, or Valley Creek.

**Table 11. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the East Lake Washington Basin for the 2005 spawning season.**

Stream	Site ID	RM	Chinook	Coho	Sockeye	Unid.
Carillon Creek	475	0	-	-	-	-
Coal Creek	439	0.6	-	-	-	1 (11/26)
	46	0.8	-	-	-	2 (10/16 - 10/31)
	441	2	-	-	-	1 (10/21)
	442	2.1	-	-	-	1 (11/12)
Cochran Springs Cr.	197	0.15	-	-	-	-
East Creek	514	0.2	-	-	-	-
Goff Creek	447	0.1	10 (10/9 - 10/21)	-	-	-
Kelsey Creek	13	2	3 (9/29 - 10/29)	1 (12/29)	-	4 (10/20 - 12/29)
	124	2.4	3 (10/3 - 10/20)	-	-	7 (9/24 - 10/8)
	120	3	-	-	-	1 (10/14)
	586	4.9	-	-	-	-
May Creek	208	0.2	-	2 (10/15)	16 (10/22 - 11/22)	2 (10/29)
	432	0.5	3 (10/11 - 10/22)	-	27 (10/11 - 11/22)	-
Mercer Slough	445	1.6	8 (9/28 - 10/13)	-	7 (10/8 - 10/13)	13 (9/17 - 10/31)
Richards Creek	27	0.7	-	-	-	8 (9/27)
	80	1.6	-	-	-	-
Sturtevant Creek	117	0.25	1 (9/30)	-	-	-
Valley Creek	122	0.1	-	-	-	-
	221	0.7	-	-	-	-
West Trib. Kelsey Cr.	116	0.25	12 (9/16 - 10/11)	-	-	6 (9/30 - 11/17)
	325	0.7	5 (10/3 - 11/2)	-	-	-
	506	0.9	2 (10/3)	-	-	2 (10/29)
	73	1.1	-	-	4 (10/9 - 10/11)	6 (10/1 - 10/7)

The only fish reported in Coal Creek were unidentified, and these were reported at all locations watched in that stream.

The observations of sockeye, chinook, and coho in the East Lake Washington Basin determined from volunteer surveys are shown in Figure 6.

**Figure 6. Observations of salmonids in the East Lake Washington Basin (see insert).**



## West Lake Sammamish Basin

Volunteers surveyed 4 sites on 2 streams in the West Lake Sammamish Basin in 2005 (Table 12). Either 10 or 24 surveys were conducted per site. Each site was monitored by 1 volunteer.

**Table 12. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the West Lake Sammamish Basin for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Idylwood Cr.	080143	423	0.1	9/20 - 11/9	10	1	2000, 2001, 2002, 2003, 2004, 2005
Lewis Creek	080162	327	0.05	10/3 - 12/19	24	1	1997, 2001, 2002, 2003, 2004, 2005
		598	0.37	11/6 - 12/29	24	1	2004, 2005
		283	0.5	11/6 - 12/29	10	1	1999, 2001, 2002, 2003, 2004, 2005

Salmonids were found in only Lewis Creek (Table 13). No adult spawners were observed in Idylwood Creek. Aside from one unidentified fish, kokanee were the only species reported in Lewis Creek.

**Table 13. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the West Lake Sammamish Basin for the 2005 spawning season.**

Stream	Site ID	RM	Kokanee	Unidentified
Idylwood Cr.	423	0.1	-	-
Lewis Creek	327	0.05	7 (11/23 - 12/6)	-
	598	0.37	15 (11/6 - 11/20)	1 (11/21)
	283	0.5	-	-

The observations of kokanee and coho in the West Lake Sammamish Basin determined from volunteer surveys are shown above in Figure 6, "Observations of Salmonids in the East Lake Washington Basin."

## East Lake Sammamish Basin

Volunteers surveyed only one site on one stream in the West Lake Sammamish Basin (Table 14). One volunteer surveyed one site at the mouth of Laughing Jacobs Creek. Five surveys were conducted over a two month period.

**Table 14. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the East Lake Sammamish Basin for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Laughing Jacobs Cr.	080166	406	0	10/7 - 12/06	5	1	2000, 2004, 2005

Coho, kokanee, and chum were reported in Laughing Jacobs Creek at the only sits surveyed (Table 15). Chum had not previously been seen in Laughing Jacobs Creek by volunteers; the location of this observation was the mouth of the creek. The chum were verified by professional biologists. Coho also had not been reported previously by volunteers, and coho presence were also corroborated by professional surveys.

**Table 15. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the East Lake Sammamish Basin for the 2005 spawning season.**

Stream	Site ID	RM	Chum	Coho	Kokanee
Laughing Jacobs Cr.	406	0	3 (11/17)	7 (11/17 - 12/6)	3 (11/17)

The observation of sockeye in the East Lake Sammamish Basin determined from volunteer surveys is shown below in Figure 7, "Observations of Salmonids in the Issaquah Creek Basin."

## Issaquah Creek Basin

Volunteers surveyed 5 sites in 1 stream in Issaquah Creek, the only stream watched in Issaquah Creek Basin in 2005 (Figure 2). The total number of surveys ranged from 5 to 28 per site (Table 16). Each site was monitored by 1 volunteer.

**Table 16. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Issaquah Creek Basin for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Issaquah Creek	080178	397	2.3	9/11 - 10/24	9	1	2001, 2002, 2003, 2004, 2005
		59	3.3	9/10 - 12/18	15	1	1997, 1998, 2000, 2001, 2002, 2003, 2004, 2005
		60	3.4	10/7 - 12/6	5	1	1997, 1998, 2005
		52	5.8	9/3 - 12/14	28	1	1998, 1999, 2000, 2003, 2004, 2005
		359	8.9	9/21 - 12/11	15	1	2001, 2003, 2005

Chinook and coho were reported in all sites watched (Table 17). Sockeye were reported at only the downstream-most site, below the hatchery intake dam.

**Table 17. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Issaquah Creek Basin for the 2005 spawning season.**

Stream	Site ID	RM	Chinook	Coho	Sockeye	Unid.
Issaquah Creek	397	2.3	34 (9/16 - 10/14)	40 (9/11 - 10/24)	32 (10/6 - 10/24)	-
	59*	3.3	31 (10/1 - 10/23)	46 (10/18 - 12/11)	-	1 (11/5)
	60*	3.4	23 (10/7 - 10/27)	14 (10/7 - 12/6)	-	2 (10/19)
	52	5.8	6 (10/14 - 10/21)	2 (10/21 - 12/6)	-	1 (10/21)
	359	8.9	1 (10/5)	6 (10/21 - 11/16)	-	1 (11/30)

\*Trout were also reported at this site.

The distributions of chinook, coho, and sockeye in the Issaquah Creek Basin determined from volunteer observations are shown in Figure 7.

**Figure 7. Observations of salmonids in the Issaquah Creek Basin (see insert).**



## North Lake Washington Tributaries

The North Lake Washington Tributaries are those streams flowing into the north end of Lake Washington (e.g., Denny, McAleer, and Thornton creeks, the Sammamish River). Volunteers surveyed 22 sites in 11 streams in 2005 (Figure 2). From 1 to 7 sites were watched per stream, and the total number of surveys ranged from 4 to 62 per site (Table 18). Each site was monitored by from 1 to 3 volunteers.

**Table 18. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the North Lake Washington Tributaries for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Brookside Creek	080049	476	0.1	10/8 - 10/30	5	1	2001, 2002, 2003, 2004, 2005
Denny Creek	-	5	0.1	9/5 - 12/29	34	1	1997, 2000, 2002, 2003, 2005
		556	0.48	9/5 - 12/29	34	1	2003, 2005
Horse Creek	-	277	0.1	9/20 - 12/29	27	2	2003, 2005
Juanita Creek	080230	389	0	9/18 - 12/29	21	1	2000, 2001, 2004, 2005
		411	0.7	9/18 - 12/27	21	1	2000, 2004, 2005
Lyon Creek	080052	427	0	10/3 - 12/17	7	1	2000, 2003, 2004, 2005
S. Fk. Thornton Cr.	080033	527	1.15	10/1 - 11/15	11	1	2002, 2003, 2004, 2005
McAleer Creek	080049	144	0.3	10/8 - 10/30	5	1	1997, 2001, 2002, 2003, 2004, 2005
		498	0.79	10/8 - 10/30	5	1	2001, 2002, 2003, 2004, 2005
		266	0.8	10/8 - 10/30	4	1	1999, 2000, 2001, 2002, 2003, 2004, 2005
		56	1.1	10/8 - 11/28	8	1	1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		314	1.6	10/8 - 11/28	8	1	1997, 2000, 2001, 2002, 2003, 2004, 2005
		315	2.1	10/8 - 11/28	8	1	1997, 2001, 2002, 2003, 2004, 2005
		484	2.6	9/24 - 12/14	16	1	2005
Peters Creek	080104	452	0.5	9/25 - 12/29	46	2	2002, 2003, 2004, 2005
Sammamish River	080087	41	7.3	9/18 - 12/27	57	3	1998, 1999, 2001, 2002, 2003, 2005
Trib 0141 to Samm. R.	080141	352	0.2	9/16 - 12/31	27	1	1999, 2000, 2001, 2004, 2005
Thornton Creek	080030	183	0.1	9/11 - 1/14/06	62	5	1997, 2000, 2001, 2002, 2003, 2004, 2005
		386	1.1	9/15 - 12/31	33	1	2002, 2005
		385	1.2	10/1 - 11/26	6	1	2000, 2001, 2004, 2005
		528	2.8	9/12 - 12/28	35	1	2002, 2003, 2004, 2005

Salmonids were found in 8 of the 11 streams surveyed in the North Lake Washington Tributaries (Table 19). No chinook or kokanee were observed in these streams. Coho were observed in Horse Creek for the first time by Salmon Watcher volunteers. Coho were also seen in Denny, Juanita, McAleer, and Thornton creeks. Sockeye were observed in the Horse, Lyon, McAleer, and Thornton creeks. The only fish observed in Peters Creek was a single unidentified species. McAleer Creek was watched half a mile further upstream than in past years. Three unidentified salmonids were observed in October and November. No salmonids were seen in Brookside Creek, South Fork Thornton Creek, or Tributary 0141 to the Sammamish River.

**Table 19. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the North Lake Washington Tributaries for the 2005 spawning season.**

Stream	Site ID	RM	Coho	Sockeye	Unid.
Brookside Creek	476	0.1	-	-	-
Denny Creek	5	0.1	1 (11/21)	-	-
	556	0.48	-	-	-
Horse Creek	277	0.1	1 (10/7)	1 (9/30)	9 (9/30 - 11/1)
Juanita Creek	389	0	-	-	2 (10/23)
	411	0.7	2 (11/16 - 11/24)	-	1 (11/2)
Lyon Creek	427	0	-	1 (11/18)	-
McAleer Creek	144	0.3	1 (10/30)	-	-
	498	0.79	5 (10/29)	6 (10/29)	-
	266	0.8	-	-	-
	56	1.1	1 (11/4)	-	2 (11/6)
	314	1.6	-	-	-
	315	2.1	2 (11/10)	-	1 (11/4)
	484	2.6	-	-	3 (10/13 - 11/9)
Peters Creek	452	0.5	-	-	1 (11/20)
Sammamish River	41	7.3	-	-	3 (9/22 - 10/5)
Trib 0141 to Samm. R.	352	0.2	-	-	-
South Fk. Thornton Creek	527	1.15	-	-	-
Thornton Creek	183*	0.1	1 (11/16)	6 (10/25 - 11/14)	2 (10/22)
	386	1.1	-	-	-
	385	1.2	-	-	-
	528	2.8	-	-	-

\*Trout were also reported at this site.

The distribution of chinook, coho, and sockeye in the North Lake Washington Tributaries determined from volunteer observations are shown in Figure 8.

**Figure 8. Observations of salmonids in the North Lake Washington Tributaries (see insert).**

## Sammamish River Tributaries

The Sammamish River Tributaries are those streams flowing into the Sammamish River from waters originating in Snohomish County<sup>4</sup> (Little Bear, North, and Swamp creeks; Big Bear Creek is discussed separately above). Volunteers surveyed 14 sites on 5 Sammamish River tributaries in 2005 (Figure 2). From 1 to 7 sites were watched per stream, and the total number of surveys ranged from 3 to 110 per site (Table 20). Each site was monitored by from 1 to 3 volunteers.

**Table 20. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Sammamish River Tributaries for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Little Bear Creek	080080	114	0	9/14 - 12/29	45	2	1999, 2001, 2002, 2005
		67	0.2	10/5 - 11/23	12	1	1997, 1998, 1999, 2001, 2002, 2003, 2004, 2005
		176	1.3	9/15 - 11/28	17	1	1997, 2000, 2001, 2002, 2003, 2004, 2005
		230	4.9	9/15 - 1/26/06	110	2	1997, 1999, 2000, 2001, 2005
Little Swamp Creek	080060	505	0.24	9/21 - 10/30	10	1	2002, 2003, 2004, 2005
North Creek	080070	112	0.9	9/19 - 11/8	7	1	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
		408	0.95	9/19 - 11/8	7	1	2000, 2001, 2002, 2003, 2004, 2005
		57	1.05	9/15 - 12/27	55	2	1998, 2001, 2004, 2005
		142	3.5	10/16 - 12/27	16	1	1997, 2001, 2003, 2005
		252	4.4	10/16 - 12/31	16	1	2001, 2004, 2005
		536	4.5	9/16 - 1/10/06	47	3	2003, 2004, 2005
		342	6.45	10/10 - 10/16	3	1	1999, 2001, 2004, 2005
Scriber Creek		247	1.3	9/16 - 12/12	35	1	2005
Swamp Creek	080059	34	0.3	9/21 - 10/30	10	1	1997, 1999, 2000, 2002, 2003, 2004, 2005

Salmonids were found in 2 of the 5 streams surveyed (Table 21). Chinook, coho, sockeye, and kokanee were all observed in Little Bear Creek. Chinook, sockeye, and kokanee were observed in North Creek. No fish were observed in Swamp, Little Swamp, or Scriber Creeks.

<sup>4</sup> Data reported from sites located in Snohomish County may also be reported by the Snohomish County Salmon Watch program.

**Table 21. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Sammamish River Tributaries for the 2005 spawning season.**

Stream	Site ID	RM	Chinook	Coho	Kokanee	Sockeye	Unid.
<b>Little Bear Creek</b>	114	0	2 (10/14 - 10/17)	-	1 (10/10)	348 (9/21 - 10/29)	15 (9/18 - 11/20)
	67	0.2	-	4 (10/5 - 10/15)	3 (10/5 - 10/15)	77 (10/8 - 11/7)	-
	176*	1.3	-	-	-	33 (9/30 - 10/21)	-
	230	4.9	-	1 (1/25/06)	-	42 (10/5 - 11/18)	-
<b>Little Swamp Creek</b>	505	0.24	-	-	-	-	-
<b>North Creek</b>	112	0.9	5 (10/7 - 10/12)	-	-	8 (10/12 - 10/29)	-
	408	0.95	1 (10/25)	-	-	22 (10/7 - 10/25)	1 (10/7)
	57	1.05	6 (10/3 - 10/17)	-	11 (11/9 - 11/21)	109 (9/30 - 11/21)	3 (10/11 - 12/16)
	142	3.5	1 (10/16)	-	-	2 (10/16 - 10/20)	1 (10/16)
	252	4.4	-	-	-	-	-
	536	4.5	-	-	-	-	2 (10/18)
	342	6.45	-	-	-	3 (10/10 - 10/16)	-
<b>Scriber Creek</b>	247	1.3	-	-	-	-	-
<b>Swamp Creek</b>	34	0.3	-	-	-	-	-

\*Trout were also reported at this site.

The distributions of chinook, coho, sockeye, and kokanee in the Sammamish River Tributaries determined from volunteer observations are shown in Figure 9.

**Figure 9. Observations of salmonids in the Sammamish River Tributaries (see insert).**



## Vashon Island

Volunteers surveyed 6 sites in 3 streams on Vashon Island in 2004 (Figure 2). From 1 to 4 sites were watched per stream, and the total number of surveys ranged from 2 to 27 per site (Table 22). All sites were monitored by 1 volunteer each, with the exception of Shinglemill Creek site 146, which was observed by 2 volunteers.

**Table 22. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed on Vashon Island for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Christensen Creek		497	0	11/6 - 12/11	8	1	2001, 2002, 2003, 2005
Fisher Creek		485	0.1	11/25 - 11/25	1	1	2001, 2002, 2003, 2005
Judd Creek	150129	489	0.75	10/10 - 12/7	11	1	2001, 2003, 2005
		491	1.4	10/5 - 12/20	21	1	2002, 2003, 2004, 2005
		492	1.25	10/29 - 1/25/06	27	1	2001, 2002, 2003, 2005
		493	1.8	10/19 - 12/23	15	1	2001, 2002, 2003, 2004, 2005
Judd Cr. Tributary		534	0	10/20 - 11/28	11	1	2002, 2003, 2004, 2005
Shinglemill Creek	150159	146	0	10/9 - 1/8/06	17	2	1998, 2001, 2002, 2003, 2004, 2005
		148	0.5	10/22 - 10/30	2	1	1998, 2001, 2002, 2003, 2005
		151	1.2	10/17 - 1/12/06	15	1	1998, 2001, 2002, 2003, 2005

Salmonids were found in four of the five streams surveyed (Table 23). Chum were observed in Fisher Creek. One single coho was seen in Shinglemill Creek; coho were also observed in Judd Creek and a tributary to Judd Creek.. No fish were observed in Christensen Creek.

**Table 23. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed on Vashon Island for the 2005 spawning season.**

Stream	Site ID	RM	Chum	Coho
Christensen Creek	497	0	-	-
Fisher Creek	485	0.1	2 (11/25)	-
Judd Creek	489	0.75	-	14 (11/3 - 11/12)
	491	1.4	-	-
	492	1.25	-	7 (11/2 - 11/5)
	493	1.8	-	1 (11/2)
Judd Cr. Tributary	534	0	-	8 (11/1)
Shinglemill Creek	146	0	-	1 (11/16)
	148	0.5	-	-
	151	1.2	-	-

The distribution of coho and chum on Vashon Island determined from volunteer observations are shown in Figure 10.

**Figure 10. Observations of salmonids on Vashon Island (see insert).**



## Central Puget Sound

Streams draining to Puget Sound that were surveyed during the 2005 Salmon Watcher season are both inside and outside WRIA 9 (Table 24). Those streams within WRIA 8 include Boeing Creek, Pipers Creek, and Venema Creek. A total of 18 sites in 6 streams draining to Puget Sound were watched in 2005. Except for 1 site along Longfellow Creek, all sites were monitored by a single volunteer.

**Table 24. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Central Puget Sound for the 2005 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Boeing Creek*	080017	436	0.1	10/18 - 1/6/06	16	1	2000, 2001, 2002, 2003, 2004, 2005
Longfellow Creek	090360	177	0.6	9/18 - 12/10	17	1	1999, 2000, 2001, 2002, 2003, 2004, 2005
		178	0.7	10/8 - 12/30	23	1	1999, 2000, 2002, 2003, 2004, 2005
		179	0.8	10/5 - 12/29	21	2	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
Miller Creek	090371	417	0.1	9/28 - 12/20	32	1	2000, 2001, 2002, 2003, 2004, 2005
		458	0.4	9/17 - 12/6	10	1	2001, 2002, 2003, 2004, 2005
		574	0.6	10/14 - 12/20	20	1	2003, 2004, 2005
		610		10/14 - 12/15	18	1	2005
		612		10/24 - 12/15	18	1	2005
Pipers Creek*	080023	70	0	10/14 - 10/28	3	1	1999, 2000, 2001, 2002, 2003, 2004, 2005
		181	0.2	9/18 - 12/26	12	1	1999, 2000, 2001, 2002, 2004, 2005
		381	0.3	9/25 - 10/31	9	1	2001, 2002, 2003, 2005
		182	0.43	10/3 - 11/22	11	1	1999, 2003, 2005
		382	0.45	10/3 - 12/12	17	1	2004, 2005
Venema Creek*		383	0.02	10/3 - 12/31	25	1	2000, 2001, 2004, 2005
		222	0.03	10/3 - 12/27	23	1	1999, 2005
Walker Creek		499	0.01	9/17 - 11/26	9	1	2001, 2003, 2004, 2005
		473	0.13	9/17 - 12/6	10	1	2001, 2002, 2003, 2004, 2005

\*Streams within WRIA 8.

Adult salmon were observed in all streams observed that drain to Puget Sound except Venema Creek (Table 25) (this discussion does not include Vashon streams; for discussion of Vashon Island streams, see section above). Chum, and coho were observed in Boeing, Longfellow, Miller, and Walker creeks. Only coho were observed in Pipers Creek.

**Table 25. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in Central Puget Sound for the 2005 spawning season.**

Stream	Site ID	RM	Chum	Coho	Unidentified
<b>Boeing Creek*</b>	436	0.1	14 (12/6 - 12/29)	15 (11/2 - 11/19)	-
<b>Longfellow Creek</b>	177	0.6	-	-	10 (10/21 - 11/18)
	178	0.7	1 (11/11)	1 (11/11)	9 (11/12 - 12/14)
	179	0.8	-	14 (10/29 - 12/9)	3 (10/31 - 10/31)
<b>Miller Creek</b>	610	-	-	-	1 (11/17)
	612	-	-	-	-
	417	0.1	6 (11/28 - 12/15)	20 (10/24 - 11/28)	5 (10/31 - 12/8)
	458	0.4	13 (11/15 - 12/6)	1 (11/9 - 11/9)	-
	574	0.6	2 (11/30 - 12/2)	5 (10/24 - 11/14)	7 (10/21 - 12/15)
<b>Pipers Creek*</b>	70	0	-	-	-
	181	0.2	-	6 (11/6 - 12/26)	-
	381	0.3	-	-	-
	182	0.43	-	-	-
	382	0.45	-	-	3 (11/14 - 12/12)
<b>Venema Creek*</b>	383	0.02	-	-	-
	222	0.03	-	-	-
<b>Walker Creek</b>	499	0.01	-	-	2 (11/9 - 11/15)
	473	0.13	6 (11/15 - 12/6)	9 (10/15 - 11/9)	-

\*Streams within WRIA 8.

The observation of chinook, chum, and coho in the WRIA 8 Central Puget Sound streams determined from volunteer surveys are included above in Figure 8, “Observations of Salmonids in the North Lake Washington Tributaries.”

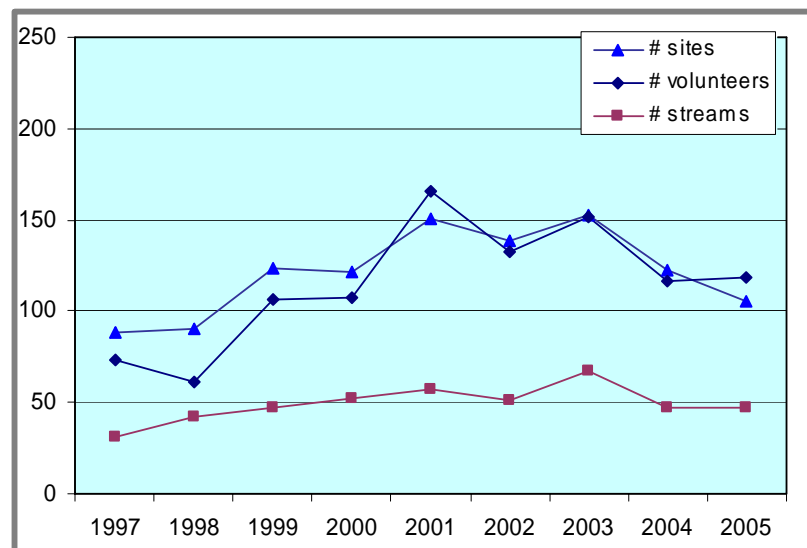
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## Volunteer Activity

The trend in the number of volunteers participating in the Salmon Watcher Program has varied over the ten years of the program (Figure 11). It should be noted that many volunteers watch more than one site, and many sites have more than one volunteer watching at it.

Although the Lake Washington Watershed has been in the geographic area of the Salmon Watcher program since the program's inception in 1996, other geographic areas have variously been "officially" involved (e.g., Vashon Island; Central Puget Sound streams).

**Figure 11. Number of volunteers (defined as an individual, pair, or group) watching in the Lake Washington Watershed from 1997<sup>5</sup>-2005.**



## Contact with Citizens

Volunteers were asked to keep track of how many citizens they came into contact with during their time by the streams. Salmon Watcher volunteers spoke with at least 897 citizens during the 2005 spawning season. Table 26 details the numbers of citizens who interacted with volunteers. Volunteers on North Lake Washington streams in Snohomish County were not asked to record citizen contacts; if any were noted on their data sheets, they were recorded, otherwise it is presumed that this number is an underestimate.

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<sup>5</sup> Numbers for 1996 are not depicted because many volunteers walked stream reaches, whereas in all other years volunteers watched from stationary positions, and many volunteers were trained differently as part of the kokanee watcher program. In 1997, 30 streams and 16 beach sites were watched; the 16 beach sites were counted in 1997 as 1 site.

**Table 26. Number of citizen contacts made by all Salmon Watcher volunteers in each of the surveyed basins.**

Big Bear Creek	Cedar River	Central Puget Sound <sup>*</sup>	E. Lake Samm.	E. Lake Wash.	Issaquah Creek	N. Lake Wash. <sup>2</sup>	Samm. River Tribs.	Vashon Island	W. Lake Samm.
104	264	112	1	186	19	135	56	13	7

<sup>\*</sup> Includes streams both inside (56 citizens) and outside (58 citizens) funded program area.

## Time Spent by Volunteers

Salmon Watcher volunteers are asked to record the start and end times of each site visit. Those times are used to calculate the amount of time volunteers spend watching stream-side. Occasionally, some volunteers do not fill in that part of the data sheet. Time underestimates notwithstanding, Table 27 illustrates the approximate amount of time spent by volunteers in each basin. More than 1,230 hours were volunteered during the 2005 Salmon Watcher season

**Table 27. Number of hours spent by Salmon Watcher volunteers in each of the surveyed basins.**

Big Bear Creek	Cedar River	Central Puget Sound <sup>1</sup>	E. Lake Samm.	E. Lake Wash.	Issaquah Creek	N. Lake Wash.	Samm. River Tribs.	Vashon	W. Lake Samm.	Snoq. River
98	301	88	2	340	27	177	132	61	15	3

<sup>1</sup> Includes streams both inside (44 hours) and outside (44 hours) funded program area.

## Limitations of Volunteer Data

Individuals, citizen groups, non-profit organizations, and government agencies all use data from the Salmon Watcher Program for various reasons (for an extensive list of reasons, please see the report from the 2000 Salmon Watcher season, Vanderhoof 2001). However, several qualifications must be kept in mind when reviewing the data in this report and especially when using the data for any purpose other than describing fish presence. The level of expertise of the volunteers varies widely: some volunteers have past experience identifying fish through professional or school training, recreational fishing, or personal interest. Other volunteers learned to identify salmon for the first time from the Salmon Watcher training session. For additional discussion on the limitations of volunteer data, please see previous reports (e.g., King County 2004).

Every year volunteers from previous years return and new volunteers enter the program who must learn to identify the different species of salmonids they might encounter in their assigned streams. In 2005, 56 percent of Lake Washington Watershed volunteers were returnees (see the beginning of the Results and Discussion section above). The variation in numbers of new versus returning volunteers each year likely has an effect on the accuracy of identification from year to year. However, if accuracy of data is decreased because of an increase in new volunteers each year, new efforts by Salmon Watcher staff to increase the accuracy of reporting by *all* volunteers should work to offset any possible decrease and actually enhance identification every year (see “Quality Assessment/Quality Control”).

Although training sessions are thorough, identification materials are provided, and technical experts are available for help with identification, some misidentifications will occur.

It is important to keep in mind that the absence of spawner sightings in a stream does not mean that spawning salmonids are not accessing that location. It does mean that fish were not seen by the volunteer at the site at the time of survey. Because of this important distinction and the other mentioned limitations of this type of survey, data in this report should be used only to indicate the presence of adult salmon at specific locations (species distribution). All other uses and benefits derived from the compilation of this data should be used cautiously and with the specific limitations of the data in mind. With very few exceptions, because most or all of these parameters are different for every stream surveyed from 1996 through 2005, comparisons of raw data likely would not yield valid information about changes in populations. Therefore, the best use for the data is in determining presence of fish and mapping fish distribution.

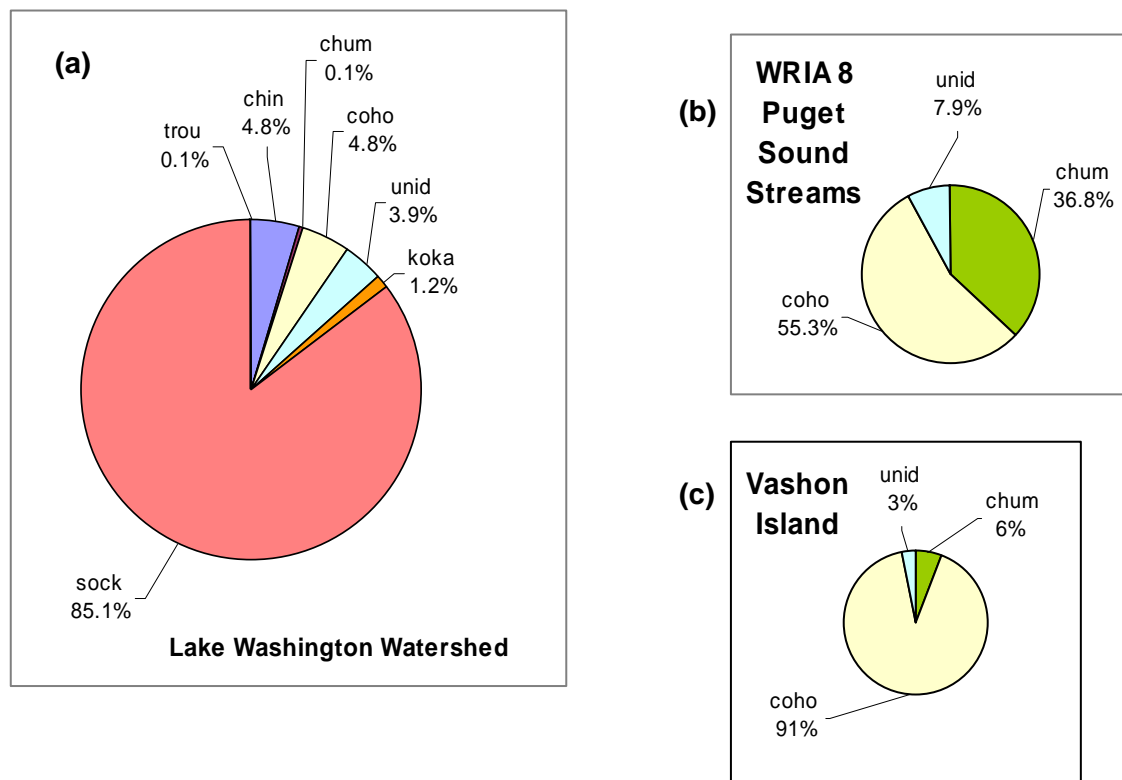
## Species Summary

Salmon Watcher Program volunteers recorded observations of all salmonid fish located during their stationary surveys, including chinook, coho, chum, and sockeye salmon, kokanee, and trout (which may have been cutthroat or rainbow trout). The ratios of all fish observed, including unidentified fish, is depicted in Figure 12a for the Lake Washington Watershed, 12b for WRIA 8 streams that drain to Puget Sound, and 12c for Vashon Island.

Of the 57 streams in the study area surveyed in 2005, sockeye were found in 19 streams. Coho were found in 22 streams, chinook in 13 streams, kokanee were reported in 6 streams, and trout were reported in 3 streams. Sockeye was the most abundant species counted by volunteers in the Lake Washington Watershed, followed by coho. Chum were observed in a total of 4 streams in the study area, including 1 on Vashon Island.

If a volunteer was unable to positively identify what species a fish was, the fish was tallied as “unidentified” (reporting a fish as unidentified was preferable to falsely identifying a species). Of the 5,930 total adult fish observed in the Lake Washington Watershed, Vashon Island, and other WRIA 8 streams in 2004, 230 were tallied as unidentified (3.88 percent). Unidentified adult salmonids were counted in 27 streams in the study area.

**Figure 12. Percentage of total fish observed in 2005 by volunteers in (a) the Lake Washington Watershed, (b) other WRIA 8 streams, and (c) Vashon Island.**





## Marked Fish and Juvenile Fish

On the data forms, one column asked the volunteers to note the “# of fish without adipose.” Hatcheries in the Lake Washington Watershed remove the adipose fins of chinook and coho before they are released into the wild. Volunteers were instructed to focus on species identification first and foremost and only try to report on adipose fin clips when possible. Most volunteers did not fill in this column, or often they noted they could not tell. Generally, water clarity must be excellent and the fish must be close and somewhat still in order to determine the presence of an adipose fin on a live fish.

No sockeye from hatcheries in the Lake Washington Watershed had their adipose fins clipped. However, volunteers reported sockeye without adipose fins in 3 streams (Table 28). Because sockeye are too small to have their adipose fins clipped when they are released from hatcheries, their adipose fins remain intact. Therefore, if sockeye are reported with missing adipose fins, either the fish are sockeye with adipose fins that were difficult to see in the stream, or the fish were another species such as coho who were missing their adipose fins. Likely, the reports of sockeye with fin clips results from a combination of both of these reasons. The report of one kokanee with a fin clip was likely an error due to one of these reasons as well; kokanee are not raised in hatcheries and therefore would not be fin-clipped.

**Table 28. Number of adipose fin clips as reported by volunteer Salmon Watchers. Streams are listed in order of number of adipose-clipped fish reported.**

Stream	chinook	coho	kokanee	sockeye*	unidentified	total
West Trib. Kelsey Creek	7				1	8
Boeing Creek		5				5
Issaquah Creek	4	1				5
Big Bear Creek				4		4
Goff Creek	4					4
Cedar River Side Channel at Dorre Don				3		3
Cottage Lake Creek			1		2	3
Miller Creek		3				3
Walker Creek		3				3
Little Bear Creek				2		2
Longfellow Creek		2				2
May Creek	2					2
Kelsey Creek					1	1
McAleer Creek		1				1
<b>Total</b>	17	15	1	9	4	46

\*See text for discussion about sockeye reported with adipose clips.

Volunteers made note of fry and/or juvenile fish in a total of 29 streams in 8 basins including WRIA 8 Puget Sound streams.

## Chinook Salmon

Chinook were observed in 5 basins in the study area during the 2005 surveys (Figure 13). A total of 243 live fish and 40 carcasses were found in 13 streams throughout the Lake Washington Watershed. Streams in which chinook were reported include (in order of most to least fish seen): Big Bear Creek (100), Issaquah Creek (95), West Trib. Kelsey Creek (19), Cottage Lake Creek (13), North Creek (13), Goff

Creek (10), Walsh Lake Diversion (9), Mercer Slough (8), Kelsey Creek (6), Cedar River(4), May Creek (3), Little Bear Creek (2), and Sturtevant Creek (1). In 2004, the greatest number of chinook were reported in the Sammamish River, yet no chinook were reported there in 2005.

Chinook were reported further upstream in the Cedar River than they had been previously seen by volunteers: they were reported as far upstream as RM 19.7. Chinook were reported by volunteers for the first time in Sturtevant Creek, a tributary to Kelsey Creek; they were seen at approximately RM 0.25 (vicinity of Bellefields office park). This observation extends the distribution of chinook in Kelsey Creek system as reported by Salmon Watchers.

**Figure 13. Distribution of chinook salmon in the program area based on Salmon Watcher observations (see insert).**

## Sockeye Salmon

Sockeye were by far the most numerous fish counted by volunteers. Sockeye were observed in 6 basins (Figure 14). A total of 4,587 live fish and 398 carcasses were observed in 19 streams (in order of most to least fish seen): Cedar River (2036), Cedar River Side Channel at Dorre Don (659), Walsh Lake Diversion (543), Little Bear Creek (500), Big Bear Creek (478), Taylor Creek (394), North Creek (144), Rock Creek (99), May Creek (43), Issaquah Creek (32), Cottage Lake Creek (29), Mercer Slough (7), McAleer Creek (6), Thornton Creek (6), West Trib. Kelsey Creek (4), Trib. 0321 to Taylor (2), John's Creek (1), Horse Creek (1), and Lyon Creek (1).

A single sockeye was reported at the mouth of John's Creek, a tributary to Lake Washington that had not previously been watched by volunteers. Additionally, sockeye were reported further upstream in the Cedar River than they had been previously seen by volunteers: they were reported as far upstream as RM 19.7. These observations mark an expansion of the known distribution of sockeye as reported by Salmon Watcher volunteers.

**Figure 14. Distribution of sockeye salmon in the program area based on Salmon Watcher observations (see insert).**

## Coho Salmon

Coho were observed in 8 Lake Washington Watershed basins including WRIA 8 Puget Sound streams, and they were observed on Vashon Island (Figure 15). A total of 258 live coho and 26 carcasses were reported in 17 streams in the Lake Washington Watershed (in order of most to least fish seen): Issaquah Creek (108), Walsh Lake Diversion (88), Cedar River Side Channel at Dorre Don (29), Big Bear Creek (11), McAleer Creek (9), Rock Creek (8), Taylor Creek (8), Laughing Jacobs Creek (7), Little Bear Creek (5), Cedar River (2), May Creek (2), Juanita Creek (2), Cottage Lake Creek (1), Kelsey Creek (1), Denny Creek (1), Horse Creek (1), and Thornton Creek (1). A total of 30 live coho were found in three streams on Vashon Island. Eleven live and 10 dead coho were found in Boeing Creek and Pipers Creek.

Coho were reported for the first time by Salmon Watcher volunteers in Horse Creek in North Lake Washington Tributaries, in Laughing Jacobs Creek in East Lake Sammamish, and in Walsh Lake Diversion of the Cedar River Basin. Coho were also reported further upstream in the Cedar River than they had been previously seen by volunteers: they were reported as far upstream as RM 19.7.

**Figure 15. Distribution of coho salmon in the program area based on Salmon Watcher observations (see insert).**

## Kokanee

Kokanee were observed in 4 basins (Figure 16). A total of 61 live fish and 7 carcasses were counted in 6 streams (in order of most to least fish seen): Big Bear Creek (23), Lewis Creek (22), North Creek (11), Cottage Lake Creek (5), Little Bear Creek (4), and Laughing Jacobs Creek (3).

**Figure 16. Distribution of kokanee in the program area based on Salmon Watcher observations (see insert).**

## Chum

Chum are a species that do not require or typically use tributaries to lakes as part of their natural history. As such, they are only expected in streams and rivers that drain directly to ocean water, such as Puget Sound. Nearly every year, a very small number (usually one or two fish) of chum are reported in the Lake Washington Watershed. Of those reported, some are possibly stray chum and others may be misidentified sockeye salmon, which sometimes have markings that can be confused for the vertical “flames” on chum. In 2005, chum were reported in two streams in the Cedar River Basin (Cedar River side channel and Walsh Lake Diversion) and one stream in East Lake Sammamish (Laughing Jacobs Creek). The fish in the Cedar River Basin were not seen by professional biologists during their surveys. However, the chum in Laughing Jacobs Creek were verified by professional fish biologists; this sighting marks the first time chum have been reported by Salmon Watcher volunteers in Laughing Jacobs Creek.

On Vashon Island, only 2 live chum were reported in Fisher Creek. Those numbers are exceptionally low. 2005 marks the first year that chum were not reported in Judd Creek since Vashon has been involved in this program (they have been reported every year since 2001).

Chum were reported in Boeing Creek (13 live and 1 dead). However, chum were not reported in Pipers Creek or Venema Creek, two streams that normally have reports of chum in them.

## Trout and Unidentified Species

Trout were reported in 3 streams in as many basins. Trout may have been cutthroat or rainbow. Although all trout species are discussed in training, it is frequently too difficult to distinguish these species in the field.

Fish of unidentified species were observed in 26 streams in 8 basins in the Lake Washington Watershed: 191 live fish and 38 carcasses were unidentifiable. A single unidentified fish was observed on Vashon in Judd Creek.

Two unidentified live fish and one carcass were reported in McAleer Creek at a site watched further upstream than the creek had been observed in previous years. The location was at approximately RM 2.6, at 200<sup>th</sup> and 15<sup>th</sup>. If these fish had been identified, they would extend the distributions for their appropriate species as reported by Salmon Watcher volunteers. Because they were not identified, it is recommended this site is watched in future years to determine who is using the stream at this location.

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## References

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## Appendices

- A. Other Streams Outside the Program Area
- B. Data Collection Form used in 2005
- C. Fauntleroy Creek Salmon Watch 2005 Summary





# **Appendix A.**

## **Other Streams Outside the Program Area**



## Snoqualmie Basin

Volunteers surveyed one site on a tributary to Tuck Creek in the Snoqualmie Basin (Table A1). Two coho were observed in this basin (Table A2).

**Table A1. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Snoqualmie Basin for the 2004 spawning season.**

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Tuck Creek	070272	487	3.2	11/20 – 1/08/06	10	1	2001, 2002, 2003, 2004,2005

**Table A2. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Snoqualmie River Basin for the 2004 spawning season.**

Stream	Site ID	RM	Coho
Tuck Creek	487	3.2	2 (1/1/06 - 1/1/06)



# **Appendix B.**

**Data Collection Form used in 2005**



# **Appendix C.**

## **Fauntleroy Creek Salmon Watch 2005 Summary**

2005 FAUNTLEROY SALMON WATCH<sup>6</sup>  
From the Fauntleroy Community Association

Spotters off the Fauntleroy ferry pier began reporting salmon in the cove in mid September. The fish began coming in on Halloween and, by Thanksgiving, two dozen veteran and new volunteers had counted 48 coho spawners in the creek. Several watchers had not seen fish in three years and so were especially rewarded. On her first watch, a student doing community service was privileged to tally 10 spawners!

For the first time, volunteer fish biologist Steev Ward was authorized to examine and mark carcasses so that the data would not be lost to predation and washout between weekly surveys for the city. The decision gave us the most reliable information to date on the number and condition of spawners. Despite this effort, many carcasses were ripped open by predators - primarily river otters - before they could be examined to check for pre-spawn mortality. Other spawners may have been lost to otters before they could make the short transit from beach to spawning ground.

From the beginning of the return, the coho sought spawning sites well upstream, in forested habitat. Washington Trout surveyors marked nine possibly viable redds above the fish ladder. Unlike most years, watchers did not see any cutthroat trout come in with the coho.

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<sup>6</sup> Fauntleroy Creek is located in Seattle in the Central Puget Sound basin of WRIA 9. The results of their annual survey are included here as an appendix to the Salmon Watcher report as a way to further share information collected by other volunteer salmon watching groups in the region.



